Illinois Environmental Protection Agency
Bureau of Air, Permit Section
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Project Summary
For an Application
From Reliant Energy
For a Revised CAAPP Permit
For Reliant Energy Aurora
2909 Eola Road, Aurora

Site Identification No.: 043407AAF
Application No.: 02030076
Date Received: December 16, 2004

Schedule
Public Comment Period Begins: February 20, 2006
Public Comment Period Closes: March 22, 2006

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I. INTRODUCTION

Reliant Energy (Reliant) has applied to the Illinois Environmental Protection Agency (Illinois EPA) for revisions to the Clean Air Act Permit Program (CAAPP) for its natural gas-fired power plant in Aurora, Reliant Energy Aurora. At this plant, Reliant operates peaking combustion turbine-generators to produce electricity.

As discussed in more detail below, the requested revisions to the permit involve various aspects of the current permit, as well as the establishment of certain "Title I conditions" to address new emission units added to the plant after the current CAAPP permit was issued in November 2003. The Illinois EPA has made a preliminary determination that Reliant's request satisfies the requirement for a revised permit. Accordingly, the Illinois EPA has prepared a draft of the revised CAAPP permit that it would propose to issue and is initiating a public comment period on its proposed action.

II. BACKGROUND

A. General Description of the Source

The Reliant Energy Aurora plant has ten simple cycle combustion turbine-generators to produce electricity. The plant operates as peaking facility providing electricity in periods of extreme demand for electrical power, typically hot summer days and very cold winter days. For a complete listing of the significant emission units currently at the plant refer to Tables 1A and 1B.

The plant was constructed pursuant to Construction Permit 99110018, which was issued in May 2000. The plant began operation in the summer of 2001. The initial CAAPP Permit for the plant was issued in November 2003.

The construction permit for the plant was based on the plant not being a major new source for purposes of both the federal regulations for Prevention of Significant Deterioration (PSD), 40 CFR 52.21, and the state regulations for Major Stationary Sources Construction and Modification (MSSCAM), 35 IAC Part 203 (which was of concern as the plant is located in the greater Chicago area, an area that was and still designated nonattainment for ozone). The plant is a major source for purposes of the CAAPP because it is permitted to emit more than 100 tons per year of nitrogen oxides (NOx) and carbon monoxide (CO). In recent years, the plant has operated with actual emissions of these pollutants that are below these thresholds. (Refer to Table 2).

B. Clean Air Act Permit Program (CAAPP)

The Clean Air Act Permit Program (CAAPP) is Illinois' federally approved operating permit program for major stationary sources of emissions and other sources, as required by Title V of the Clean Air Act. Permits issued under the CAAPP are known as "CAAPP permits." In Illinois, major stationary sources and other sources covered by Title V of the Clean Air Act are required to apply for and obtain a CAAPP permit. The authority for

the CAAPP is contained in Section 39.5 of Illinois' Environmental Protection Act (Act), which also contains other provisions laying out the CAAPP.

CAAPP permits must generally include the applicable emissions limitations, standards and other requirements under state and federal air pollution control laws and regulations for the various emission units at a source. CAAPP permits also include related provisions to assure compliance with those applicable requirements. CAAPP permits generally do not impose new substantive requirements for control of emissions. Rather, CAAPP permits provide for, among other things, testing, monitoring, work practices, recordkeeping, and reporting (a portion of which may be "new" requirements) to assure compliance with existing state and federal emission control requirements. The conditions of CAAPP permits are enforceable under federal law by the USEPA, as well under state law by state authorities and the public.

Depending on the nature of the revisions to a CAAPP Permit being requested by a source, revisions to an issued CAAPP permit may be processed in one of three ways, as set forth in Sections 39.5(13) and (14) of the Act. The procedures for administrative amendments apply for the simplest changes, including corrections of typographical errors, name changes and changes in ownership. The procedures for minor permit modifications apply for requested changes to the substantive terms and conditions of CAAPP permits that are not significant. The procedures for significant permit modifications apply to all other requested changes to the terms and conditions of a CAAPP permit. These procedures require that a proposed significant modification to a CAAPP permit be processed using the same process as is used for initial permit issuance and permit renewal, including opportunity for public participation and review of a proposed permit by USEPA. Although, public participation and USEPA review are required for proposed significant modifications of CAAPP permits, these proceedings are generally narrower in scope than the proposed issuance or renewal of the CAAPP permit. Attention is focused on the changes to a CAAPP permit requested by the Permittee and the new or revised conditions, if any, that should be placed in the modified CAAPP permit to implement the requested changes.

C. Title I Conditions

The revised CAAPP permit would contain conditions, including new and revised conditions, established by the Illinois EPA pursuant to authority originating in Title I of the federal Clean Act and regulation adopted thereunder, e.g., 40 CFR 52.21 - federal Prevention of Significant Deterioration (PSD) and 35 IAC Part 203 - Major Stationary Sources Construction and Modification (MSSCAM). These conditions are referred to as Title I Conditions. These conditions of the CAAPP permit set limitations on the certain emission units at this plant to address the applicability of permitting programs for the construction and modification of sources, including PSD and MSSCAM, which programs were established pursuant to Title I of the Clean Air Act (CAA). These programs are implemented by the Illinois EPA pursuant to Sections 9, 9.1, 39(a) and 39.5(7)(a) of Illinois' Environmental Protection Act (Act). These "Title I conditions" within the revised CAAPP would be specifically designated as "T1," if they reflect requirements established in construction permits issued for this source, "T1R" if they revise

requirements established in such construction permits, or "T1N" if they are newly established in this CAAPP permit.

III. PROPOSED CHANGES TO THE CAAPP PERMIT

In response to Reliant's application for a revised CAAPP permit, the Illinois EPA is proposing to make a number of changes to the current CAAPP permit for Reliant Energy Aurora, as generally discussed below. An itemized listing of the intended changes to the CAAPP permit, as contained in the draft of the revised CAAPP Permit, is also provided in Attachment 1.

As a general matter, these changes do not entail a fundamental change in the nature of the plant. Rather, they respond to developments that have occurred since the CAAPP permit was issued for the plant, including construction of certain new units to support operation of the turbines, actions taken by the Illinois EPA with respect to the NOx Trading Program, and the actual utilization and nitrogen oxides (NOx) emissions of the turbines as related to the methodology used to monitor NOx emissions.

The proposed changes to the CAAPP permit are being processed using the procedures for significant permit modifications because certain changes requested by Reliant to the conditions of its CAAPP permit do not qualify for processing as minor permit modifications. This is because they involve establishment of permit conditions for the plant that accommodate certain new emission units for which there is not an underlying construction permit and changes to existing monitoring requirements.

A. Provisions to Address Additional Emission Units at the Plant

Equipment for "Blackstart" of the Plant:

In September 2004, Reliant added a 1499 horsepower diesel oil fired engine-generator to the plant to allow the plant to operate in the event of a blackout. In a blackout, this new engine generator would be used to start one of the six smaller turbines at the plant, which would then be used to start the other turbines at the plant. In the absence of the new engine-generator, the turbines at the plant could not be started during a blackout because electricity would not be available from the grid. While the electricity for startup of the plant normally comes from the grid, that power would not be available during a blackout. The capability to "blackstart" the plant is desirable, as electricity from the plant can then be used to restart other power plants that do not have blackstart capability and facilitate overall recovery from a blackout.

To maintain blackstart capability, this new engine is periodically operated or exercised to confirm that it is available for operation in the event of a blackout. Reliant estimates that the engine typically operates 10 hours in a year. Because the electricity produced by the engine-generator (1.1 MW) when it is being exercised goes to the grid and cannot be distinguished from electricity produced by the turbines, Reliant operates the engine under a new unit exemption under federal Acid Rain Program. This requires that the sulfur

content of the diesel oil to the engine be limited to no more than 0.05 percent sulfur on an annual basis.

To allow blackstart of the plant, Reliant has also installed a small natural gas fired fuel heater that is big enough to heat natural gas fuel for one of the turbines. In the event of a blackout, this fuel heater would be used with the diesel engine to get one turbine running. Once the first turbine was online, the plant would switch over to the original fuel heater installed with the plant, which is large enough to heat fuel for the entire plant.

Equipment for Cold Weather Operation of the Smaller Turbines:

In September 2004, Reliant also added four natural gas fired water heaters to the plant, each with a maximum heat input capacity less than 5 million Btu. The heaters allow cold weather operation of the six smaller turbines. The inlets to these six turbines were originally equipped with cooling coils to enhance hot weather operation of these turbines. This allows the inlet air to these turbines to be cooled during hot weather operation by circulating chilled water through the coils. The new water heaters now also allow hot water to be circulated through these coils to heat the inlet air to facilitate cold weather operation of these turbines. The capability for cold weather operation of these turbines is desirable, because it allows the plant to meet off-season requests for power with either the larger or smaller turbines depending upon the amount of power that is requested. Without cold weather capability for the smaller turbines, all requests for off-season power had to be met with the larger turbines, which cannot provide small amounts of power as efficiently as the smaller turbines.

To maintain the capability for cold weather operation of the smaller turbines, the heaters are periodically operated or exercised to confirm that they are available for operation if wintertime operation is requested. Reliant estimates that the heaters would typically operate 10 hours in a year for exercise. Operation pursuant to requests for power could occur for up to 100 hours per year.

Discussion

Reliant did not obtain construction permits for these new emission units. This is because the units qualify as insignificant activities under 35 IAC 201.210 for purposes of CAAPP and meet unit-specific exemptions from the State permit program under 35 IAC 201.146.

The revised CAAPP Permit would establish new Title I Conditions to address these new units and assure that the plant is still not a major source for purposes of PSD or MSSCAM. The revised permit would revise Title I Conditions for existing units at the plant, lowering permitted emissions of NOx to “accommodate” the new units and maintain the plant’s permitted NOx emissions below 250 tons/year, overall.

To accommodate the new units, the revised CAAPP permit would also raise the permitted emissions of the plant for purposes of fees by less than one ton/year.

To address compliance with applicable regulatory requirements and the newly established Title I Conditions, the revised permit would include provisions for periodic monitoring for the new units. For example, for the new engine, the permit would require appropriate records for the sulfur content of the fuel oil to address applicable emission standards. The permit would also include provisions for periodic observations of the opacity from the new units, which provisions were specifically developed to address the limited operation that is expected for these units.

The permit would also define the application of the term "prompt" for reporting of any deviations by the new units. Given the nature of the units, deviations should not be anticipated. Nevertheless, certain "significant" deviations, including exceedances of applicable short-term emission standards or limitations, or failure to carry out required work practices, are identified for which a deviations must be reported within 30 days. Other deviations are to reported with the quarterly monitoring reports that must be submitted for the turbines. This reporting arrangement has been developed for the new units so that the source will appropriately notify the Illinois EPA of those events that might warrant individual attention.

B. Treatment of the Six Smaller Turbines As Budget EGU under the NOx Trading Program

The six smaller turbines at the plant are proposed to be explicitly identified as affected "budget units" under the NOx Trading Program for Electrical Generating Units, 35 IAC Part 217, Subpart W, rather than as units that are exempt from substantive requirements of the NOx Trading Program based on status as "low emitters." In actual practice, all turbines at the plant, including the six smaller turbines, have been treated as budget units under the NOx Trading Program, in both 2004, the first year of the program, and in 2005.

As a result of this change, these six turbines would now specifically be identified as budget units in Section 6.1 of the permit. In addition, limitations restraining the operation and emissions of each of these turbines to keep NOx emissions below 25 tons per season and maintain low-emitter status would be removed from the permit. These limitations would be replaced by new restrictions as related to applicability of requirements for Compliance Assurance Monitoring, 40 CFR Part 64, as discussed below.

Discussion

This change in the CAAPP permit has been pursued at the request of the Illinois EPA, following up on a commitment made to USEPA by the Illinois EPA in conjunction with the approval of the NOx Trading Program as part of Illinois' State Implementation Plan. In particular, USEPA was concerned about potential ambiguity in the language in 35 IAC 217.472(d), which addresses the consequences of low-emitter status for the allocation of NOx allowances. The Illinois EPA explained that this provision did not place "low emitters" outside of the budget, but required that the allocation of NOx allowances to budget units be reduced to account for the emissions of units with low-emitters based on their permitted seasonal emissions of NOx. Accordingly, rather than reduce the

allocation of NOx allowances by the permitted emissions of the six smaller turbines, the smaller turbines have been treated as budget units, with NOx allowances retired based on their actual seasonal emissions of NOx.

C. Monitoring Methodology for NOx Emissions from the Turbines

Reliant has requested revisions to the provisions of the CAAPP Permit for monitoring emissions of NOx from the turbines that would allow it to use the Low Mass Emission Excepted (LMEE) Methodology, an alternate monitoring protocol under the federal Acid Rain program. The CAAPP permit currently requires that continuous NOx emissions monitoring systems be used. The LMEE methodology uses emission factors developed from testing of a unit and parametric monitoring system to calculate NOx emissions from monitored data for fuel flow rate, operating mode, e.g., water injection rate, and heat content of fuel.

The turbines at the plant qualify for use of this alternative monitoring methodology under the federal Acid Rain. In particular, all ten turbines at the plant have actual annual NOx emissions that are less than 50 tons, as compared to the criteria for use of the LMEE Methodology, i.e., annual emissions less than 100 tons and seasonal emissions (May through September) less than 50 tons. The turbines also qualify for use of alternative monitoring methodology as they meet the criteria under the Acid Rain program to be considered gas fired peaking units. Reviewing data for 2003, 2004 and 2005, the Capacity Factors of each turbine on an annual basis are much less than 20 percent (maximum only 5 percent). The Capacity Factors of the turbines on a three-year average are less than 10 percent (maximum only 2.2 percent). Refer to Table 3 for a summary of relevant NOx emissions data and operating information for the individual turbines. Finally, the test data for the turbines shows compliance with applicable emission limitations across the normal operating range of the turbines. Refer to Table 4 for a summary of the results of emission testing.

Discussion

Continuous emissions monitoring for NOx is not required by the applicable regulations governing the turbines including the federal Acid Rain program or the New Source Performance Standards (NSPS). In addition, the use of an alternative monitoring for the turbines at the plant is supported by the provisions of the Acid Rain program that establish an alternative monitoring methodology for units that operate at low capacity factors and with low emissions. Sources using alternative monitoring under the Acid Rain program are still required to submit operating information and collected NOx emissions data to USEPA's Clean Air Markets Division, which then posts this data on the Internet. Thus the issue posed to the Illinois EPA by the requested revision to the permit is whether the specific circumstances of the Reliant-Aurora plant otherwise justify maintaining a requirement for use of continuous emissions monitoring independent of specific regulatory requirements.

The circumstances of the plant do not generally warrant continued use of continuous emissions monitoring as a means to assure that the plant is not a major source of NOx emissions for purposes of PSD applicability. The annual emissions of NOx from the plant during five years of operation have been well below 250 tons, the level at which the plant would be major source, with actual NOx emissions ranging from about 14 tons to 75 tons (refer to Tables 2 and 3). In addition, testing of the turbines has shown that NOx emissions comply with applicable short-term emission rates with a fair margin of safety (refer to Table 4). Finally, the alternative monitoring methodology under the Acid Rain program tracks NOx emissions on an hourly basis, so is an appropriate method to generally monitor emissions of NOx from the turbines for purposes other than the Acid Rain program. Indeed, during shutdown of turbines of the smaller turbines, the LMEE methodology tends to overestimate NOx emissions, because it requires use of a default emission rate during all periods when emissions are not controlled by the water injection, even during the low load operations that occurs during a shutdown.

In conjunction with these changes, other changes would also be made to the permit as appropriate for use of the LMEE methodology to generally track NOx emissions, to account for the fact that it acts to overstate NOx emissions during startup and shutdown of the turbines. This is necessary because use of the LMEE methodology to address compliance with the hourly limitations of NOx emissions from the turbines could otherwise, incorrectly suggest exceedances of those limitations during startups and shutdowns.

In addition, for the six smaller turbines, for which water injection is used to control NOx emissions, limitations would be included in the permit so that these turbines would not qualify large pollutant specific emission units for purposes of 40 CFR Part 64, Compliance Assurance Monitoring. The new restrictions are needed because CAM Plans for NOx emissions would otherwise be required to accompany this permit revision, as changes would be made to the permit that affect the methodology used for measuring NOx emissions from these units.

D. Other Changes to Terms and Conditions of the Permit

In conjunction with the revisions to the permit requested by Reliant, the Illinois EPA is also proposing to make various changes to the permit to clarify applicable requirements for the ten turbines at the plant. The stimulus for these changes included: 1) The above changes being made to the permit, which necessitated reworking of other provisions; 2) Revisions to the New Source Performance Standards (NSPS) for Stationary Gas Turbines, 40 CFR 60, Subpart GG made by USEPA; 3) Renewal of the Acid Rain Permit for the plant, which was effective January 1, 2005; and 4) Continuing evolution of the CAAPP in terms of the standard format and certain standard conditions of CAAPP Permits.

In particular, for the turbines, the condition of the permit identifying the NSPS standards, has been simplified to remove excess verbiage and more directly state the applicable emission standards for NOx and SO_2 for the turbines under the NSPS. The existing Title I

conditions for the turbines that establish short-term limitations on NOx emissions have been reorganized for clarity, while not altering the numerical emission limitations for the turbines that were originally established in the construction permit for the plant.

Other changes that would be made in the revised CAAPP permit to the terms and conditions of the permit are addressed in Attachment 1.

IV. REQUEST FOR COMMENTS

It is the Illinois EPA's preliminary determination that Reliant's request for a revised CAAPP permit meets the standards for issuance of a revised permit. The Illinois EPA is therefore proposing to issue a revised permit and has prepared a draft of the revised CAAPP permit that it would plan to issue.

Comments are requested on this proposed action by the Illinois EPA and the proposed conditions on the draft of a revised CAAPP permit. If substantial public interest is shown in this matter, the Illinois EPA will consider holding a public hearing in accordance with 35 IAC Part 166.

Table 1A: Significant Emission Units Addressed by the Current CAAPP Permit

Emission Unit	Description	Emission Control Equipment
Turbine 1	Natural Gas Fired GE Type 7FA Turbine Nom. 170 MW output (1,885 million Btu/hr input)	Dry Low NO_x Burners
Turbine 2	”	”
Turbine 3	”	”
Turbine 4	”	”
Turbine 5	Natural Gas Fired GE Type LM6000 Turbine Nominal 45 MW (444 million Btu/hr input)	Water Injected Burners
Turbine 6	”	”
Turbine 7	”	”
Turbine 8	”	”
Turbine 9	”	”
Turbine 10	”	”
Fuel Heater 1	Natural Gas Fired Indirect Fuel Heater Nominal 12.0 million Btu/hr input	None

Table 1B: Additional Emission Units To Be Addressed by the Revised CAAPP Permit

Emission Unit	Description	Control Equipment	Placement in CAAPP Permit
Engine	Diesel Oil Fired Engine Generator Nominal 1.1 MW (1499 Horsepower output)	None	New Section 7.3
Emergency Fuel Heater	Natural Gas Fired Indirect Fuel Heater Nominal 1.0 million Btu/hr	None	Included in Section 7.2
Inlet Air Water Heaters	Four Natural Gas Fired Water Heaters Dual Units with Two Burners and Stacks Each Nominal 5.0 million Btu/hr (total per heater)	None	Included in Section 7.2

Table 2 – Annual Emissions of the Plant (tons/year)

Data submitted by Reliant in its Annual Emission Reports

Year	NOx	CO	PM	SO_2	VOM
Permit Limit*	248.1	210.9	28.6	3.0	9.2
2004	13.5	4.4	0.5	0.1	0.2
2003	17.9	6.2	0.7	0.9	0.3
2002	62.7	34.4	3.6	0.2	1.4
2001	44.5	23.0	5.3	0.5	0.6

* Limit in current CAAPP Permit, as originally established in Construction Permit 99110018.

Table 3 – NOx Emissions and Operation of the Turbines in Recent Years

Data from the Electronic Data Reports submitted by Reliant under the federal Acid Rain Program, as available on the USEPA's Clean Air Markets' Internet site.

Turbine	2003			2004			2005*			Ave
	NOx T/Yr	Oper. Hours	Capacity Factor (C F) %	NOx T/Yr	Oper. Hours	C F %	NOx T/Yr	Oper. Hours	C F %	C F %
1	2.6	110.8	1.0	1.6	61.8	0.6	12.5	501.3	4.9	2.2
2	2.2	99.8	1.0	2.1	86.2	0.8	11.0	465.0	4.6	2.1
3	3.2	127.1	1.3	1.3	42.5	0.4	5.0	189.1	1.8	1.2
4	1.5	69.4	0.7	1.8	70.3	0.7	5.9	225.3	2.2	1.2
5	1.3	92.4	0.9	1.2	70.7	0.7	7.8	451.4	4.9	2.2
6	1.1	85.3	0.8	1.0	64.8	0.6	7.2	445.0	4.7	2.0
7	1.8	122.1	0.7	0.7	47.3	0.5	7.4	450.4	4.8	2.0
8	1.9	127.4	1.2	1.0	60.5	0.6	7.0	413.3	4.6	2.1
9	1.2	84.7	0.8	1.1	64.1	0.7	5.2	276.6	3.0	1.5
10	1.4	88.0	0.9	1.1	63.4	0.6	5.1	278.2	3.1	1.5
Total	18.2	-	-	12.9	-	-	74.1	-	-	
Average	-	100.7	0.9	-	63.2	0.6	-	369.6	3.9	1.8

* Through the third quarter, i.e., January through September.

Table 4 – Summary of Emission Test Results for Turbines at the Plant

Turbine (Test Date)	High Load Data	Upper Mid Load Data	Lower Mid Load Data	Low Load Data	Applicable Limits
Turbine 1 (5/2002)	100%	90%	70%	60%	
NOx – ppm	7.7	6.1	6.8	7.1	75[a]
- lb/hr	49.1	35.7	34.3	32.7	105
CO – lb/hr	1.98	0.3	1.1	1.02	31
VOM – lb/hr	0.97	0.94	1.9	0.34	3
Turbine 4 (4/2001)	100%	87%	73%	60%	
NOx – ppm	5.7	6.1	5.94	7.0	75[a]
- lb/hr	38.6	36.1	31.1	32.6	105
CO – lb/hr	2.6	1.1	0.86	1.6	31
VOM – lb/hr	0.12	0.09	0.06	0.20	3
Turbine 6 (4/2001)	100%	87%	73%	60%	
NOx – ppm	22.0	25.5	26.1	30.4	75[a]
- lb/hr	36.3	37.1	33.2	34.0	41
CO – lb/hr	32.0	13.6	11.0	7.0	45
VOM – lb/hr	0.55	0.53	0.59	0.10	4
Turbine 9 – (5/2002)	100%	90%	70%	60%	
NOx – ppm	22.1	11.3	13.5	12.9	75[a]
- lb/hr	35.6	16.0	16.5	14.0	41
CO – lb/hr	23.6	24.7	21.2	20.7	45
VOM – lb/hr	1.01	1.47	1.11	0.97	4
Turbine 10 – (5/2002)	100%	90%	70%	60%	
NOx – ppm	11.5	13.8	12.3	24.9	75[a]
- lb/hr	18.9	19.6	14.8	26.4	41
CO – lb/hr	21.8	19.0	20.1	12.4	45
VOM – lb/hr	1.04	0.79	0.92	0.31	4

a. Limit of NSPS, 40 CFR 60, Subpart GG, without upwards adjustment for the turbines heat rate, Btu/MW.

Attachment 1 – Description Of Significant Revisions To This Permit

(This attachment is Attachment 4 of the draft of the revised CAAPP Permit.)

1. Revised Cover Page
   (New page replaces former page)

   The permit is identified as a CAAPP Permit, rather than a Title V-CAAPP Permit and Title I Permit. In addition to the new heading, the footnote that previously addressed the possible presence of Title 1 Conditions in the permit has been removed.

   Appropriate changes made to identify a revised CAAPP Permit.

2. Revised Table of Contents
   (New pages replace former pages)

   The Table of Contents revised to lists various new conditions, sections and attachments added to the permit.

3. Revised Section 1.0
   (New page replaces former page)

   Condition 1.5 – New Condition 1.5 is added to generally address the Title 1 Conditions that are present in the permit, replacing the footnote on this subject formerly on the cover page.

4. Revised Section 4.0, Listing of Significant Emission Units:
   (New page replaces former page)

   This section now lists the support equipment constructed at the source in 2004, which are added in this revised CAAPP permit.

5. Revised Section 5.0, Overall Source Conditions:
   (New pages 10 to 15, replace former pages 10 to 16)

   Condition 5.5.1 – To accommodate the new support equipment, the permitted emissions of the plant for purposes of fees are raised by 0.2 ton/year.

   Condition 5.5.3 and 5.6.1(b) - Source-wide emission limitations are added to the permit to ensure that the source is not a major source for purposes of PSD or MSSCAM, even with the additional support equipment. In particular, NOx emissions from the source are limited to 249.0 tons/year, whereas they were originally limited to 247.5 tons/year. The new limitations revise previous Title I Conditions originally set in Permit 99110018, prior to the installation of the additional support equipment. Related changes are made to Condition 5.6.1(b), to provide for recordkeeping to verify compliance with these plant-wide emission limitations.

Other – Various revisions are made to other conditions in Section 5 to clarify applicable regulations and notification and reporting requirements. In particular, previous Condition 5.2.8 dealing with a PM10 Contingency Measures Plan is removed, as the plant is not located in an area where this requirement is applicable.

6. Revised Conditions 6.1, NOx Trading Program
(New pages 18, 19 and 22. replace former pages 18 and 22)

Condition 6.1.2 - Turbines CTG05 through CTG10 are now identified as budget EGU for purposes of the NOx Trading Program. This is a change from "low-emitter status" pursuant to 35 IAC 217.754(c) as previously reflected in the CAAPP Permit.

Condition 6.1.8 - For turbines CTG05 through CTG10, the applicable NOx emission rate is now specified for the purpose of determining the allocation of NOx allowances to these turbines.

7. Revised Condition 6.3, Acid Rain Program
(New pages 27 and 28, replace former pages 27 and 28)

Condition 6.3.3 - Monitoring of NOx emissions from the ten turbines at the source may be conducted using the Low Mass Emissions Excepted Methodology, as also provided for by the federal Acid Rain Program, rather than by continuous emission monitoring.

8. Revised Section 7.1, Unit Specific Conditions for Turbines
(New pages 29 to 41, replace former pages 29 to 40)

Condition 7.1.5(e) – Limitations are established restricting operation and emissions of the six smaller turbines to below levels that trigger applicability of Compliance Assurance Monitoring (CAM) under 40 CFR Part 64, replacing previous restrictions on these turbines to maintain low-emitter status. The new restrictions are needed because CAM Plans would be required to accompany this permit revision if the turbines were large pollutant specific emission units for purposes of 40 CFR Part 64.

Condition 7.1.6(b) – A lower limitation is set on annual NOx emissions of the turbines to ensure that the plant is not a major source for purposes of PSD or MSSCAM, even with the additional support equipment. NOx emissions from the turbines are now limited to 244.5 tons/year, whereas they were originally limited to 247.0 tons/year. The lower limitation revises a previous Title I Condition originally set in Permit 99110018, prior to the installation of additional support equipment.

Condition 7.1.8 – Changes to monitoring requirements allow use of the Low Mass Emissions Excepted Methodology Monitoring, 40 CFR 75.19, for monitoring NOx emissions from the turbines, rather than continuous emissions monitoring. Other related changes to monitoring requirements are made consistent with USEPA's recent revisions to 40 CFR Part 60, Subpart GG, including imposition of requirements for monitoring the water to fuel injection rate for the six smaller turbines that use water injection for control of NOx emissions. Various

revisions are made to other conditions addressing operational and production limitations, work practices, monitoring, recordkeeping and reporting requirements, and compliance procedures consistent with use of Low Mass Emissions Excepted Methodology for monitoring NOx emissions. In particular, recordkeeping requirements are imposed on each turbine to verify that the applicability criteria for use of the Low Mass Emissions Excepted Methodology continue to be met.

Other - Various revisions also made to other conditions to clarify applicable regulations, notification and reporting requirements. For example, Condition 7.1.3((c), with respect to applicability of the NSPS, 40 CFR Part 60, Subpart GG, is simplified and revised for clarity and consistency with current regulatory provisions.

9. Revised Section 7.2, Unit Specific Conditions for Natural Gas Fired Heaters
(New pages 42 to 48, replaces former pages 41 to 44)

General – Condition are revised to also address the emergency natural gas heater and inlet air water heaters installed after the original construction of the plant, as well as the original natural gas heater. Various revisions are made to existing conditions to appropriately address the applicable requirements for the additional units. Operational, testing and recordkeeping requirements are also set for both the added and original units to address compliance with applicable emission control requirements.

Condition 7.2.6 – Limitations are established on annual emissions of the additional heaters to ensure that the plant is still not a major source for purposes of PSD or MSSCAM with these heaters. Because these heaters were not the subjects of a Construction Permit, these Title I Conditions are newly established. Emission limitations for the original heater are also revised, e.g., NOx emissions from the heater are now limited to 1.1 tons/year, whereas they were originally limited to 0.5 tons/year. These limitations for the original heater revise previous Title I Conditions originally set in Permit 99110018.

10. New Section 7.3, Unit Specific Conditions for Diesel Engine
(New pages 49 to 55)

General - This section addresses the diesel engine generator that has been installed at the plant to provide “Black Start” capability in the event of a blackout and outage of the surrounding power grid. The section includes conditions identifying applicable emission control requirements. Operational, testing and recordkeeping requirements are also set for the engine to address compliance with those emission control requirements.

Condition 7.3.6 – Limitations are established on annual emissions of the engine to ensure that the plant is still not a major source for purposes of PSD or MSSCAM with this engine. Because the engine was not the subject of a Construction Permit, these Title I Conditions are newly established.

11. Revised Condition 8.1, Permit Shield

This condition is revised to coordinate the timing of any permit shields to the date of release of the proposed permit, as is appropriate for a permit that has been revised using the procedures for significant permit modifications.

12. New Condition 9.15, General Authority for the Terms and Conditions

This condition is added to the permit to provide the general source of authority for new and revised terms and conditions in the revised permit, as well as for existing terms and conditions in the permit.

13. New Attachment 2, Acid Rain Permit
(New attachment replaces former attachment)

The current Acid Rain Permit issued for the plant, which covers the period from January 1, 2005 to December 31, 2009, is included as Attachment 2 of the permit.

14. New Attachment 3, Guidance
(New page 3-1, replaces former pages 3-1 to 3-3, 4-1, 4-2, 5-1 and 5-2)

New Attachment 3 replaces former Attachments 3, 4 and 5, to provide guidance on relevant permitting procedures for CAAPP Permits by means of a reference to an Internet Site maintained by the Illinois EPA where such guidance is provided.

15. New Attachment 4, Description of the Significant Revisions to This Permit
(New pages 4-1 to 4-4)

This attachment has been added to the permit.